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Mineral Industry Surveys

For information, contact:
Michael J. Magyar, Molybdenum Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4964, Fax: (703) 648-7757
E-mail: mmagyar@usgs.gov

Cindy C. Chen (Data)
Telephone: (703) 648-7991
Fax: (703) 648-7792
E-mail: cchen1@usgs.gov

Internet: http://minerals.usgs.gov/minerals

MOLYBDENUM IN AUGUST 2006

Domestic production of molybdenum in concentrate in August 2006 was slightly more than that of the previous month and slightly less than that of August 2005, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 7,380 metric tons (t) at the beginning of 2006, and about 5,830 t at the end of August.

According to Ryan's Notes (2006c), the August monthly average price range for U.S. ferromolybdenum (FeMo) was from $27.500 to $28.111 per pound of molybdenum content, compared with $27.000 to $27.500 in July. European FeMo monthly averages ranged from $60.278 to $61.444 per kilogram (kg) of molybdenum content in August compared with $57.214 to $58.500 per kg in July. In August, worldwide molybdenum oxide (MoO_3) prices ranged from $26.128 to $26.733 per pound versus $24.757 to $25.179 per pound in July.

Continued strong demand for molybdenum in the steel industry, coupled with production problems in South America, Mexico, and China, combined to keep the molybdenum market tight. The strike at Grupo Mexico S.A. de C.V.'s La Caridad Mine continued, production at the Falconbridge Ltd. Collahuasi Mine was below plan, and a conveyor belt broke at Corporacion Nacional del Cobre's (Codelco) Chuquicamata Mine. As a result, concentrates are in short supply for Chinese producers that rely on South American imports (Ryan's Notes, 2006b). In addition, a Phelps Dodge Corp. representative stated that the closed molybdenum mines in China's Huludao Region, Liaoning Province, were unlikely to reopen in 2006, further reducing concentrate supplies (Ryan's Notes, 2006a). Codelco hoped to return to normal production at Chuquicamata by September.

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, U.S. consumption by end use, and stocks of molybdenum material in July and August 2006. Export data for June and July 2006 and import data for July 2006 are also included.

References Cited

Ryan's Notes, 2006a, PD sees 2006 moly prices at $22-26: Ryan's Notes, v. 12, no. 30, July 31, p. 1.
Ryan's Notes, 2006b, Tight moly supply pushes prices up: Ryan's Notes, v. 12, no. 33, August 21, p. 2.
Ryan's Notes, 2006c, [untitled]: Ryan's Notes, v. 12, no. 35, September 4, p. 10.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS[1]

(Metric tons, contained molybdenum)

	2005		2006		
	January-December[p]	January-August	July	August	January-August
Production	57,900	37,900	5,430 [r]	5,510	41,000
Shipments:[2]					
Domestic	38,200	25,100	3,440 [r]	3,630	27,500
Export	19,400	12,500	1,580	2,230	13,800

[p]Preliminary. [r]Revised.
[1]Data are rounded to no more than three significant digits.
[2]As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS[1]

(Metric tons, contained molybdenum)

	2005		2006		
	January-December[p]	January-August	July	August	January-August
Gross production	78,500	54,900	5,470	6,780	53,300
Internal consumption[2]	48,700	35,300	3,520	4,380	33,600
Gross shipments	46,700	31,700	3,390	3,820	33,600

[p]Preliminary.
[1]Data are rounded to no more than three significant digits.
[2]Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3

U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS[1]

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb-denum[2]	Ammonium and sodium molybdate	Molyb-denum scrap	Other	Total
2006, July:						
Steel:						
Carbon	12,700	W	--	--	W	12,700
High-strength low-alloy	35,400	9,050	--	--	11,300	55,800
Stainless and heat-resisting	171,000	64,300	--	W	6,510	242,000
Full alloy	168,000	131,000	--	--	1,510	300,000
Tool	49,900	W	--	--	--	49,900
Total	437,000	204,000	--	W	19,400	660,000
Cast irons (gray, malleable, and ductile iron)	W	7,730	--	--	763	8,490
Superalloys	50,200 r	W	--	(3)	114,000 r	165,000 r
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	94	3,110	--	--	--	3,200
Mill products made from metal powder[4]	--	--	--	--	189,000 r	189,000 r
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	294	294
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	10,700	10,700
Other	1,090	31,500 r	72,900 r	1,840	16,800	124,000 r
Grand total	566,000 r	246,000 r	72,900 r	1,840	351,000 r	1,240,000 r
Stocks, July 31, 2006	436,000 r	181,000	3,580 r	17,400 r	847,000	1,480,000
2006, August:						
Steel:						
Carbon	13,000	W	--	--	W	13,000
High-strength low-alloy	34,300	7,940	--	--	11,300	53,600
Stainless and heat-resisting	181,000	64,200	--	W	6,510	252,000
Full alloy	165,000	130,000	--	--	1,510	297,000
Tool	55,400	W	--	--	--	55,400
Total	449,000	202,000	--	W	19,400	671,000
Cast irons (gray, malleable, and ductile iron)	W	7,740	--	--	763	8,500
Superalloys	92,700	W	--	(3)	154,000	247,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	128	5,300	--	--	--	5,420
Mill products made from metal powder[4]	--	--	--	--	192,000	192,000
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,100	1,100
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	11,300	11,300
Other	1,090	32,200	73,200	1,840	16,800	125,000
Grand total	621,000	247,000	73,200	1,840	395,000	1,340,000
Stocks, August 31, 2006	455,000	176,000	3,040	5,190	849,000	1,490,000

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes calcium molybdate.

[3]Included in "Other" of the "Superalloys" category.

[4]Includes ingot, wire, rod, and sheet.

[5]Includes construction, mining, oil and gas, metalworking machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY[1]

(Kilograms, contained molybdenum)

	2005		2006		
Country	January-December	January-July	June	July	January-July
Australia	110,000	101,000	--	--	7,350
Austria	3,230	2,590	--	--	--
Belgium	9,430,000	3,080,000	433,000	365,000	4,480,000
Brazil	66,700	66,100	20,000	19,200	56,000
Canada	3,840,000	2,680,000	275,000	133,000	1,710,000
Chile	177,000	111,000	--	47,900	140,000
China	4,390,000	3,050,000	--	--	398,000
Costa Rica	3,810	3,810	--	--	--
India	41,100	37,300	--	--	2,170
Italy	35,100	35,100	--	--	--
Japan	2,050,000	1,380,000	236,000	210,000	1,390,000
Korea, Republic of	11,700	11,400	--	--	11,000
Mexico	3,130,000	1,570,000	544,000	471,000	3,240,000
Netherlands	15,000,000	10,400,000	818,000	700,000	5,930,000
Taiwan	3,600	3,600	122	9,620	608
United Kingdom	7,310,000	4,070,000	469,000	714,000	4,600,000
Other	767,000	600,000	--	2,290	50,400
Total	46,400,000	27,200,000	2,790,000	2,670,000	22,000,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY[1]

(Kilograms, contained molybdenum)

	2005		2006		
Country	January-December	January-July	June	July	January-July
Argentina	--	--	--	--	14,500
Australia	--	--	24,100	--	24,100
Austria	11,400	--	--	--	--
Brazil	17,200	16,600	--	314	37,700
Canada	1,930,000	1,240,000	444,000	58,600	1,500,000
Denmark	--	--	--	--	57
India	--	--	--	201	367
Indonesia	5,930	5,930	--	--	--
Japan	--	--	--	--	60
Mexico	88,700	4,940	28,000	2,100	136,000
Netherlands	33,300	33,300	--	--	--
Singapore	--	--	1,630	--	1,630
Switzerland	--	--	--	--	12,000
Total	2,090,000	1,300,000	498,000	61,200	1,730,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS[1]

(Kilograms, unless otherwise specified)

	January-December 2005			July 2006			January-July 2006		
Material	Gross weight	Contained molybdenum	Value[2] (thousands)	Gross weight	Contained molybdenum	Value[2] (thousands)	Gross weight	Contained molybdenum	Value[2] (thousands)
Ore and concentrates roasted	8,570,000	5,380,000	$306,000	849,000	517,000	$12,400	6,560,000	4,020,000	$101,000
Ore and concentrates other	13,800,000	6,480,000	440,000	559,000	272,000	14,200	6,050,000	2,840,000	132,000
Molybdenum chemicals:									
Oxides and hydroxides	1,240,000	NA	42,500	3,380	NA	46	401,000	NA	15,300
Molybdates of ammonium	4,220,000	2,730,000	53,600	160,000	96,800	5,500	1,090,000	650,000	25,300
Molybdates (all others)	101,000	24,800	1,250	20,100	6,570	212	114,000	23,700	1,280
Molybdenum orange	983,000	NA	4,780	61,400	NA	371	469,000	NA	3,140
Ferromolybdenum	6,340,000	4,040,000	278,000	458,000	295,000	16,500	3,160,000	2,000,000	105,000
Molybdenum powders	92,900	78,500	7,740	85,700	54,700	2,930	143,000	108,000	7,440
Molybdenum unwrought	99,000	98,800	5,750	10,400	10,300	562	131,000	131,000	7,170
Molybdenum waste and scrap	503,000	480,000	35,600	43,500	43,200	2,800	314,000	309,000	19,800
Molybdenum wire	21,300	NA	3,160	3,900	NA	440	11,600	NA	1,530
Molybdenum other	163,000	NA	20,700	8,290	NA	1,370	90,900	NA	10,600
Total	36,200,000	19,300,000	1,200,000	2,260,000	1,300,000	57,300	18,500,000	10,100,000	429,000

NA Not available.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Customs value.

Source: U.S. Census Bureau.